

**BALLARAT
AMATEUR
RADIO
GROUP INC.**

2001/06 61

NEWSLETTER

P.O. BOX 1261
Mail Centre
Ballarat

JUNE 2001
VOLUME 24 No. 6

Official Newsletter of the Ballarat Amateur Radio Group Inc. No. 6953T



VK3BMIL

2001/06 02



BALLARAT AMATEUR RADIO GROUP INC.
 Inc. No: 6953T
 OF
OFFICE BEARERS - 2000 / 2001



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H'MVENT. CO-ORD.	TOM GEORGE	VK3DMK	ELAINE		5339 9737
SCRAMBLE CO-ORD.	REG. CARTER	VK3CAZ	SHELAGH		5341 7585
AMENITIES COMMITTEE	BETTY - SHIRLEY - SHELAGH - MARY.				

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LIFE MEMBERS OF BARG.

VK3SE	STAN WIDGERY
VK3CFB	JIM WRIGHT
VK3AXH	IAN MC.DONALD
VK3WN	KEVIN HUGHES
exVK3AQM	PHIL SNEDDON

REPEATERS

VK3RBS (Voice)	146.900 MHz - Mt Ben Nevis
VK3RBA (Voice)	146.750 MHz - Mt. Buninyong.
VK3RPC (Packet)	144.750 MHz - Mt. Warrenheip.
VK3RBU (Voice)	438.475 MHz - Mt. Hollowback.
VK3RMB (Beacon)	432.535 MHz - Mt. Buninyong.
VK3RBV (ATV)	426.250 MHz - Ballarat

ACTIVITIES CLUB NET: Thursday nights at 8 pm. (8.30 pm during Daylight Saving). Freq: 3.610 MHz +/- QRM.

2 METRE SCRAMBLE: Sunday Nights at 7.50 pm. Freq: 146.425 to 146.600 MHz. Inc,

Call back held on VK3RBA 146.750 MHz.

MEETINGS: General Meeting : Last Friday of each month (except December) at 7.30 pm.

Venue: Club Rooms - Ballarat Airport - Unit 31 - Off Learmonth Road - Ballarat.

CONSTRUCTION NIGHTS: Saturday Afternoons at clubrooms.- 1 pm.,

HAMVENTION : 27th & 28th. October 2001.

INTERNET ADDRESS: <http://www.barg.org.au>

PLEASE ADDRESS ALL CORRESPONDENCE to: The Secretary - BARG Inc. Box 1261 Mail Centre Ballarat 3354

NEWSLETTER ARTICLES to Marion Diprose (VK3FJW) 7 Winifred Street Mitchell Park 3355 - email to :- [diprose @ giant.net.au](mailto:diprose@giant.net.au)



The Minutes



MINUTES OF B.A.R.G GENERAL MEETING

Meeting held on 25th May 2001

The meeting was opened at 8PM by the President Geoff VK3ADB, welcoming all in attendance.

Apologies: VK3's HRZ, DMK, AAP, CFH, FGC, FMC, and LDC

Minutes: The minutes of the previous meeting as presented in the newsletter were confirmed.

Moved VK3HEG, Sec. VK3DCS

Correspondence:

In: Various club newsletters, Junk mail, Bank Statements (x2), City Rent Statement, reply from the Editor of the Courier, Wiltronics invoice, WIA – Science Show.

Out: Nill

Treasurer's Report: As read by Geoff on behalf of Murray. Vk3AAI, VK3CAZ

Reports:

Facilities: Rewiring of the power meter system is going along nicely and we should only have one meter shortly. Which will save some money on two services.

Hamvention: Going along well. We need some fox hiding places around town, that haven't been used before as the guys have located all previous hiding spots. Steve has been in contact with the ACA, asking if it's OK to use a few LPID's for the foxhunt and those that don't have licences. The catering is in hand, and we will have a new entry label system in place. This should make things easier for the people running things.

Scramble/Net: The net is going along strong, with good turn out's each week. This will be the last year for the scramble, as the interest has waned, compared to previous years. We seem to only get the same few operators taking part.

Tech.: The VHF antenna has been installed and should be operational shortly. The club has purchased the FT101 that was offered, as this will allow us to repair our faulty unit.

Publicity: A sausage sizzle has been put forward by Doug to be held at one of the Trash and Trivia stalls to raise money for the club. Motion: Go ahead and do the sizzle – Passed. Hardware House have also offered the club the use of facilities at the store for us to hold a sizzle there. Another local club raised over \$300 as a result. Motion: That the club purchase the required food for the sizzle(s) with a budget of \$150. Moved: Bob Brown, Sec: Clem VK3BVI – Passed.

Doug is looking at getting a plaque/info board placed with the other service directory's that are scattered around town. The special event's people have put club information on the Special Events website. The URL will be given as further information comes to hand.

Newsletter: With MAF Aviation now re-locating up north, we require the services of a new newsletter editor for August. If you wish to take over from Marion, please get in contact with a committee Member or Marion her self.

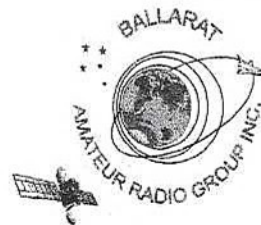
General: A four draw filing cabinet has been sourced and it will be used to store club records and other items. Please keep on eye out for the bee's that have a hive in the adjoining flat. Tom VK3DMK's wife's mother passed away recently. The club members send their commiserations to Tom's family.

Meeting closed at 9pm

2001/06 04

Coming Events

Friday 29th June	General Meeting
Saturday Afternoons	Construction Days—Club Rooms at 1pm
Sunday Nights	2M Scramble—7.50pm 146.425 to 146.600 MHz
Thursday Nights	Club Net 3.610 MHz—8.00pm
4th Wednesday	WICEN Training Nights
Friday 27th July	General Meeting



SHORT COURSE

Our Brace short course dates are:

First course starts August: Thurs 9th, Sat 11th, Tues 14th

Second course starts October Thurs 11th, Sat 13th, Tues 16th

The course costs will be: \$27.50 full price, \$22.00 concession

Bob brown is our representative. Contact Bob (5345 8129) or BRACE for details.

GEORGE FOWLER AUCTION

The fourth George Fowler Auction was held on Sunday 27th May. Early inspection of goods on display commenced about 11am followed by the soup and sandwich lunch. Silver tongued auctioneer Bob VK3BNC slipped into his patter at 1.30pm with knowledge of every device that came under the hammer amply demonstrated throughout the afternoon. It was a learning curve for the writer and I daresay also for many in attendance. There were many things to see and purchase, with some fierce bidding taking place. Computer bits, cables and a mystery box or two, valves and speakers, a big PA speaker (that's now a garden item) a collection of AR and other mag's were up for grabs. The radio operator was even catered for with radios, some working and some not. There was broadcast radio's dating back a few years, which our auctioneer had to sell: a few items got past though.

Tom DMK is now the proud owner of a nice olden style bedside radio, Bob brown purchased things he didn't even know he needed. The auctioneer's job was made a little harder with his assistant putting an assorted range of speakers in with some items (this got a number of laughs from the crowd). The mood of the room was a very jovial one, with one liner's being thrown around like the bidding. The twenty meter beam out the side of the clubrooms went to a lucky bidder, and also the tower (our secretary should have put in a higher bid, but missed out).

Next Dinner Outing

Please contact Betty (5339 5317) to book your table at the **Western Hotel on Friday 13th July**

Enjoy a great evening of good food and conversation with friends.

August gathering will be at the Eureka Stockade Hotel on the 10th..

A few kits were on sale; some even had been completed, some not. Steven Dick purchased a nice collection of cables and those speakers made an appearance again. Reg was going home with a car full of bits and that nice big box of valves has even produced some nice suppressers. The time passed and it was time to head home. Lots of things got swapped and money changed hands. A good day was had by all and a big thanks must go to the ladies for providing the food and to our auctioneer for doing a great job (even with those speakers making an appearance a few too many times.)

SAUSAGE SIZZLE

A successful fundraiser was conducted by a happy bunch of BARG members outside the main entrance of Hardware House in Wendouree on 16th June. Although an overcast day they managed to sell out by 2pm. The next **sausage sizzle** will be Saturday 14th July same venue. Please support the Club. Come along and buy a sausage.

CLUB NET FROM THE CLUB ROOMS

5th July Clem BVI
12th July Geoff ADB
19th July Reg CAZ (from home)
26th July Steve Walsh and Doug UBA

This is a standing Rotational Roster. If you would like to join the rotation (or withdraw), please speak to Clem at the coming General Meeting.

Why not come along and join the Coordinator in the club rooms on Thursday evenings at



ROSTERS LAWN MOWING ROSTER

JULY Neil VK3KQQ

Chris Drossos VK3SWL

If you are unable to mow the lawns this month, please arrange a swap with someone else.

TECH TALK



THE TEN COMMANDMENTS OF ELECTRICAL SAFETY.

1. Beware of the lightning that lurks in an undischarged capacitor lest it cause thee to be bounced upon thy backside in a most ungentlemanly manner.
2. Cause thou the switch that supplies large quantities of juice to be opened and thusly tagged, so thy days may be long on this earthly vale of tears.
3. Prove to thyself that all circuits that radiateth and upon which thou worketh are grounded lest they lift thee to high frequency potential and cause thee to radiate also.
4. Take care thou useth the proper method when thou taketh the measure of high-voltage circuits so that thou dost not incinerate both thee and the meter, for verily though cast no account number and can be easily replaced, the meter doth have one and as a consequence bringeth much woe on the supply department.
5. Tarry thee not amongst those who engage in intentional shocks for they surely are non-believers and are not long for this world.
6. Take care thou tampereth not with interlocks and safety devices, for this incureth the wrath of thy seniors and bringeth the fury of the safety officer down upon thy head and shoulders.
7. Work thee not on energised equipment, for if thou doeth thy mates will surely be buying beers without thee and thy space at the bar will be filled by another.
8. Verily verify 1 say unto thee, never service high voltage equipment alone, for electric cooking is a slothful process and though might sizzle in thine own fat for hours on end before thy Maker sees fit to end thy misery and take thee into his fold.
9. Trifle not with radioactive tubes and substances lest thou commence to glow in the dark like a firefly.
10. Commit thee to memory the works of the prophets, which are written in the instruction books, which giveth the straight info and which consoleth thee and thou will not make mistakes.

FANCY MAKING YOUR OWN RECTIFIERS ?

We are so used to just popping into a supplier and buying over the counter a rectifier capable of handling almost any current we may desire to rectify that it is difficult to think of managing without them.

IT IS POSSIBLE TO MAKE A RECTIFIER but it does end up rather bulky and somewhat perilous in operation especially near carpets etc.

An electrolytic rectifier known at the time as the 'Nodon-Valve' type is quite easy to put together, if you dare. The electrodes are Aluminium for the Cathode and Lead for the anode.

The electrolyte is Ammonium Phosphate dissolved at the rate of 2 lb in 1 gallon of water (say 1 kg in 4.5 litres). Sodium Phosphate can be used but is not as good. The current capabilities are of the order of 5 - 10 mA per sq cm of aluminium and the voltage handling is of the order of 50 - 75 volts (maximum 150 V).

However it ceases to rectify at temperatures above 22 Degrees C (say 70 F) and requires 'forming'.

That is best done by passing a.c. through the cell allowing 25 volts per cell using a series resistor to set the value. The forming takes several hours to complete and the cell can be considered 'formed' when the current falls to near zero.

TECH TALK



In operation a faint glow can be seen from a working rectifier. A typical example' ??? uses a half gallon jar filled with the solution of ammonium phosphate dissolved in warm water. When cold test with litmus paper. If the paper turns red the electrolyte should be neutralised by the addition of a little ammonia. The aluminium cathode is a 3/8 in (10 mm) rod fixed in centre of lid and the anode is a sheet of lead bent in a letter 'C' surrounding it. Or if you fancy it, try this one using Tantalum (if you can get some). Fill a half - pint jar almost full with Sulphuric acid of s.g. 1.260 and add 5 ~ 10 cc of a mixture of 40 grains of ferrous sulphate in 200 cc of distilled water. The lead and tantalum must be pure and the finished rectifier will give about 250 mA At 40 - 75 volts.

Me, I think I will go to the local supplier and buy what I need.

WINDING COILS ONTO FERRITE TOROIDS

One of the risks when putting turns onto a ferrite toroid is the possibility of rubbing the enamel insulation of the wire as you pass it through the toroid repeatedly, to find it almost inevitably kinking and catching.

Well try this way of doing it which is a manual version of the way the manufacturer does it with a machine.

Measure out the length of wire which will be required as nearly as you can and then using a suitable former such as a piece of dowel or the like, wind it into a nice tidy 'sausage' coil of about twice or three times the final desired diameter.

Tape one end turn to the next turn and then starting with the other end of the 'sausage' thread that end turn through the toroid and tape it to the adjoining turn.

Now rotate the coil steadily and all the turns will wind themselves onto the toroid until finally you will have to un-tape the last turn and refasten it after it has gone onto the former/toroid.

Leaving enough spare wire to make your needed connection un-tape the linked coil at one end and tape it to the core.

Now you can rotate the coil to tighten the wire onto the former until all the wire is threaded through the toroid and positioned on the core and then the last turn can be un-taped and re-taped to anchor the other end of the coil.

CALCULATING L AND C VALUES FOR TUNED CIRCUITS

One useful way of calculating the values of L and C which you require for resonance at a given frequency can be very closely approximated by the following method.

Take the wavelength in METRES at which you require resonance (a calculator is useful there), then divide it by TWO and this gives the inductance in MICROHENRIES and the capacitance in PICO FARADS.

Then scale to get the correct L/C ration.

For example 10 MHz = 30 metres. Then $L (H) = 30/2 = 15$ $C (pF) = 30/2 = 15$

Now scale by, say three, to give practical values when $L = 5 \mu H$, $C = 45 pF$.

This will certainly be very close indeed to the values you need.

Cheers, Reg VK3CAZ



PRACTICAL ENGINEERING

Fred Jeffrey
ABN 20 678 266 532

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THANK YOU

We acknowledge the assistance of
The Hon. Michael Ronaldson MP
Federal Member for Ballarat
in the
Printing of this Newsletter.

PLEASE NOTE

CUT OFF DATE FOR ARTICLES FOR PUBLICATION IS NOW THE SECOND MONDAY OF EACH MONTH.

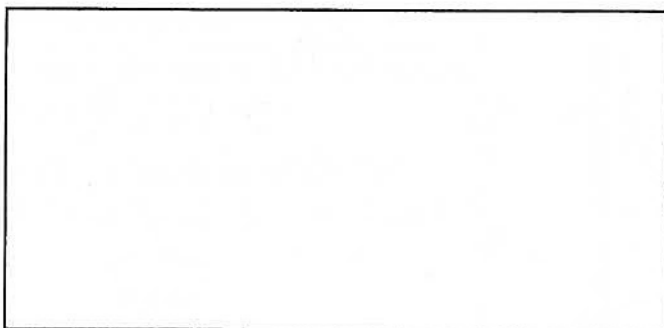
B.A.R.G.

The Ballarat Amateur Radio Group Inc.

A group of radio enthusiasts licensed to experiment with local and international radio communications on an amateur basis.

NEW MEMBERS ALWAYS WELCOME.

OFFICIAL NEWSLETTER OF THE BALLARAT AMATEUR RADIO GROUP INC.
Inc.No: 6953T



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